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UFOs, ghosts, and cryptids on TikTok: How short-form videos on a social media platform present paranormal phenomena

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ABSTRACT

Paranormal-themed content has proliferated on short-form video social media platforms such as TikTok. Extending previous research on media messages about paranormal topics, the present study builds on a cognitive accessibility-based account of cultivation and priming to identify characteristics of paranormal TikTok videos that may influence viewers. Specifically, it examines what claims, visual evidence, sources, voices, and features such videos include, as well as how these message characteristics are associated with user engagement. In doing so, the study draws on a content analysis of TikTok videos about three topics: unidentified flying objects, hauntings, and cryptids ($N = 243$). The videos sampled frequently included paranormal claims and purported footage but were less likely to include skeptical claims, photographs, scientific sources, or government sources. Human voices outnumbered computer voices, and male voices outnumbered female voices; additionally, the gender gap in voices varied by topic. Music and text on screen were common, whereas filters were less common. Several message factors, including topic and the presence of female voices, were associated with greater engagement. Taken together, these results point to future directions in studying how short-form social media videos may shape paranormal beliefs—and, by extension, beliefs about other fringe topics, such as conspiracy theories.

When social media users visit short-form video platforms such as TikTok, Instagram Reels, and YouTube Shorts, they can encounter not only celebrities, dance routines, and lip-syncing, but also purported paranormal phenomena such as unidentified flying objects (UFOs), hauntings, and cryptids (that is, creatures not recognized by mainstream science). 'There are ghosts everywhere on TikTok,' reported one observer in 2020. 'On paranormal TikTok, you'll find a collection of amateur ghost hunters, mediums, and people who think their houses are haunted' (Schroder, 2020). Similarly, TikTok videos about UFOs and Bigfoot (a particularly prominent cryptid) are not only common but sometimes receive millions of views (McManus, 2023; Wegner, 2022). The rise of this genre has also created a new constellation of social media stars, some of whom have amassed hundreds of thousands of followers, and launched popular hashtags such as #paranormal (Herren et al., 2021; Sagers, 2022).

The popularity of paranormal-themed content on sites such as TikTok is part of a broader pattern across media platforms. Over the past few decades, traditional news media outlets and documentary or reality television programs have presented an array of messages about paranormal topics (Nisbet, 2006, 2016). For example, U.S. cable networks and streaming services have offered viewers reports of

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unidentified flying objects on Showtime's *UFO* (2021) and Netflix's *Top Secret UFO Projects Declassified* (2021), investigations into hauntings on SyFy's *Ghost Hunters* (2004–2016, 2019-present) and the Travel Channel's *Ghost Adventures* (2007-present), and searches for Sasquatches on Animal Planet's *Finding Bigfoot* (2011–2018, 2021) and the Travel Channel's *Expedition Bigfoot* (2019-present). In the realm of social media, video-sharing sites have emerged as additional platforms for paranormal-themed content (Basaraba, 2024; Stise et al., 2024), with some of the most popular YouTube videos about ghosts and UFOs receiving millions of views (Wright et al., 2024).

Many members of the U.S. public, in turn, say they believe in paranormal phenomena. Following a wave of publicity surrounding military footage of purported UFOs and the release of a report on 'unidentified aerial phenomena' (UAPs) from the U.S. Office of the Director of National Intelligence, belief that 'some UFOs have been alien spacecraft visiting Earth' increased from 33% in 2019 to 40% in 2021 (Gallup, 2021). More recent polls have found that around four in ten respondents believe in UFOs and ghosts (Ipsos, 2023), while around a quarter believe in cryptids such as Bigfoot, the Yeti, the Chupacabra, and the Loch Ness Monster (YouGov, 2024). While a host of psychological and social factors – including cognitive styles, education, religious values, and social identities – may shape paranormal beliefs (Bader et al., 2017; Dean et al., 2022; Silva & Woody, 2022), research drawing on cultivation theory (Gerbner & Gross, 1976; Hermann et al., 2021; Shanahan & Morgan, 1999) also shows that patterns in media use can predict who holds such beliefs (Sarapin & Sparks, 2015; Sparks & Miller, 2001; Sparks et al., 1997). In particular, studies have found that multiple forms of media use – including consumption of documentary television, news media, and YouTube videos – are linked to paranormal beliefs (Dawson et al., 2023, Stise et al., 2024a; Wright et al., 2024).

These findings suggest that the proliferation of paranormal-themed messages on short-form video platforms could also shape belief in the paranormal. In analyzing such messages, the present study focuses on TikTok given that it was the most-downloaded app in 2020–21 (Boffone, 2022) and had around a billion and a half users worldwide as of 2024 (Statista, 2024b). In the United States, a 2023 poll found that a third of adults used the site – a 12% point increase from just two years prior (Gottfried et al., 2024). TikTok is especially popular among young people: a majority of U.S. teens use it (Anderson et al., 2023), and 39% of U.S. young adults say they regularly get news from it (Leppert & Matsa, 2024). Furthermore, the way in which TikTok's algorithm emphasizes interpersonal connections over content factors may make it particularly vulnerable to the spread of misinformation and disinformation (Bösch & Divon, 2024). Thus, analyzing the nature of paranormal content on the platform could illuminate the potential effects of short-form social media videos on belief in paranormal phenomena – and, more broadly, potential effects on related beliefs about other fringe topics, such as conspiracy theories (Van Elk, 2015) and urban legends (Dagnall et al., 2017).

With this in mind, the present study explores how TikTok presents three types of purported paranormal phenomena: UFOs, hauntings, and cryptids. Though the paranormal is a complex and contested concept, these test cases all fit the criteria of falling outside both mainstream science *and* mainstream religion (Bader et al., 2017); accordingly, analyses of paranormal media and beliefs often group the three cases together (Bader et al., 2017; Fitch, 2013; Hill, 2017; Krulos, 2015). Moreover, recent research has demonstrated that patterns in media use predict belief in UFOs (Stise et al., 2024), hauntings (Wright et al., 2024), and cryptids (Dawson et al., 2023). To be sure, these three categories do not exhaust the full set of paranormal phenomena in media discourse and popular beliefs; for example, media messages about extrasensory perception (ESP) and psychic powers can also shape public beliefs (Brewer, 2013; Nisbet, 2006). However, UFOs, hauntings, and cryptids do occupy prominent places in the contemporary landscape of paranormal media (Bader et al., 2017; Brewer & Ley, 2021). Given that beliefs about these topics are also associated with beliefs about conspiracy theories (Lobato et al., 2014; Wilson, 2018), analyzing TikTok messages about them can provide starting points for wider analyses of whether – and, if so, how – the platform fosters fringe beliefs.

To identify TikTok message factors that may shape paranormal beliefs, the study builds on a theoretical account of how media messages influence such beliefs by priming thoughts in audience members' minds (Dawson et al., 2023; Nisbet, 2006), along with empirical findings regarding message

effects on these beliefs (Brewer, 2012, 2013; Dawson et al., 2023; Johnson & Sparks, 2024; Sparks, 1998; Sparks & Pellechia, 1997; Sparks et al., 1994, 1995, 1998). Specifically, it focuses on the extent to which paranormal TikTok videos include three types of content that may shape viewers' beliefs: affirming or skeptical claims; video footage or photographs as evidence; and scientific or government sources. The present study also draws on accounts of gendered cultural discourses surrounding paranormal topics (Bader et al., 2017; Silva, 2023; Silva & Woody, 2022) in considering whose voices paranormal-themed TikTok videos include as well as on accounts of social media affordances (Treem & Leonardi, 2013; Tufekci, 2014) in examining the extent to which such videos feature music, text, and filters. The study then examines how all of these factors are related to user engagement with paranormal-themed TikTok videos. The data for addressing the study's questions come from a content analysis of 243 highly-liked English-language TikTok videos.

Media messages about the paranormal

One line of research into media exposure and paranormal beliefs proceeds from cultivation theory's core premise that dominant messages in the media system can cultivate beliefs among audience members (Gerbner & Gross, 1976; Shanahan & Morgan, 1999) and the corollary that cultivation processes may reflect differences in content across media genres (Bilandzic & Busselle, 2008; Hawkins & Pingree, 1981; Potter, 1993). In broad terms, cultivation research posits that the media – especially television, but increasingly social media as well (Hermann et al., 2021) – have taken on the role of society's mythmakers, storytellers, and shapers of social reality (Gerbner & Gross, 1976). Consistent with the logic of genre-specific cultivation, survey research conducted during the 'paranormal media boom' of the 1990s (the era of the popular television drama *The X-Files* along with paranormal-themed television pseudo-documentaries such as 1995's *Alien Autopsy: Fact or Fiction*; Stise et al., 2024, p. 630) found that consumption of television – particularly paranormal-themed television – was linked to belief in the paranormal (Nisbet, 2006; Sparks & Miller, 2001; Sparks et al., 1997).

Subsequent research has reaffirmed this conclusion while also identifying more nuanced patterns in media cultivation of paranormal beliefs (Brewer, 2012, 2013; Sarapin & Sparks, 2015). One such pattern is that consumption of ostensibly nonfictional media cultivates paranormal beliefs, whereas use of fictional media plays less of a role in doing so (Nisbet, 2016). For example, recent studies have shown that viewing documentary and reality television about paranormal topics cultivates paranormal beliefs in general (Brewer & Ley, 2021) as well as belief in specific types of paranormal phenomena, including UFOs (Stise et al., 2024), cryptids (Dawson et al., 2023), and hauntings (Wright et al., 2024). Viewing horror films also cultivates belief in the paranormal, but only for films that purport to be based on true stories (Geusens, 2023). Looking beyond television and film, recent research has found that YouTube use can cultivate belief in both UFOs (Stise et al., 2024) and hauntings (Wright et al., 2024).

In terms of potential cognitive mechanisms underlying media cultivation of paranormal beliefs, previous research has drawn on an accessibility-based heuristic processing model (Shrum, 1996, 2001) to highlight how media messages may prime thoughts about paranormal phenomena in audience members' minds (Dawson et al., 2023; Nisbet, 2006). As Nisbet (2006) observes, people's beliefs tend to be 'dependent on the types of considerations and examples about a topic that are available in short term memory. Which depictions of reality are more accessible in a person's mind than others is a function of the nature of media content and the media consumption habits of the individual.' For example, seeing a video about a U.S. government report on UFOs could activate viewers' thoughts about both UFOs and the U.S. government as well as potential connections between these two topics. More broadly, the frequency of exposure to media messages about paranormal phenomena could, in conjunction with the content of those messages, influence the accessibility of associated considerations in the minds of audience members and thereby shape beliefs about such phenomena.

Consistent with this model, experimental research has shown that exposure to specific media messages can foster or erode belief in the paranormal, depending on their content (Sparks, 1998; Sparks et al., 1994, 1995). For example, Sparks and Pellechia (1997) found that

watching a television news story increased belief in UFOs when it included a scientific authority who affirmed their existence. Sparks et al. (1998) also found that watching a television program decreased belief in UFOs when it included a scientific authority who discredited them. Similarly, the effects of media messages about hauntings (Brewer, 2012) and ESP (Brewer, 2013) can depend on whether they cast research on such phenomena as being scientific or present scientists debunking paranormal investigations. More recently, Johnson and Sparks (2024) found that watching YouTube videos that supported or criticized UFO conspiracies shaped audience members' belief in UFOs and government conspiracies related to them.

These findings raise questions about what types of paranormal content are available from social media video-sharing platforms – questions that previous research has only begun to explore systematically. Looking at popular YouTube videos about UFOs and ghosts, one recent study found that (1) paranormal claims appeared in a large majority of videos about each topic; (2) a majority of videos about each topic included purported footage of paranormal phenomena; (3) relatively few videos included scientific sources; and (4) a substantial proportion of videos about UFOs included government sources, whereas few videos about hauntings did so (Wright et al., 2024). However, it is not clear whether these findings extend to short-form video social media platforms such as TikTok, particularly given their differing design affordances (Dvir-Gvirsman et al., 2024) and user demographics (Anderson et al., 2023). For example, TikTok's design promotes shorter messages: popular YouTube videos have historically averaged several minutes in length (Kessell et al., 2019) whereas the typical TikTok video is under a minute long (Statista, 2024a). TikTok's user base is also younger – and, thus, perhaps, more persuadable – than YouTube's (Gottfried et al., 2024).

As a step toward understanding how paranormal content on TikTok could shape users' beliefs, the present study addresses a series of questions about such content. Given findings that affirming or skeptical claims in media messages about paranormal phenomena can influence audience members' beliefs (Brewer, 2012, 2013; Sparks & Pellechia, 1997; Sparks et al., 1998) – along with evidence that the overall tenor of media depictions regarding such phenomena can be linked to broader patterns in media use and public beliefs (Brewer & Ley, 2021; Nisbet, 2006; Sarapin & Sparks, 2015; Sparks & Miller, 2001; Sparks et al., 1997) – the study's first research question asks about two types of potential claims on the platform:

RQ1: What proportion of TikTok videos about paranormal topics include (a) paranormal claims and (b) skeptical claims?

Here, a paranormal claim is defined as one that affirms the existence or possibility of paranormal phenomena whereas a skeptical claim is one that denies their existence or possibility.

Along with claims, imagery presented as evidence of paranormal phenomena could influence audience members' beliefs. As a case in point, one study found that the effects of exposure to videos about UFOs on belief in UFOs depended on the presence of vivid imagery (Sparks et al., 1995). Likewise, research has found that exposure to media images can foster belief in cryptids (Dawson et al., 2023). In part, such effects may reflect the role of perceptually realistic visuals in shaping audience responses (Kirby, 2003, 2011). Building on this logic, researchers have argued that the prevalence of purported footage in YouTube videos about paranormal phenomena may partly account for links between YouTube use and paranormal beliefs (Stise et al., 2024; Wright et al., 2024). Given that the same logic could extend to images on short-form video platforms, the present study addresses the following question:

RQ2: What proportion of TikTok videos about paranormal topics include (a) purported video footage of paranormal phenomena and (b) purported photographs of paranormal phenomena?

The heuristic processing model underlying an accessibility-based account of cultivation and priming suggests that source cues in media messages can also shape audience members' beliefs (Shrum, 2001). In the context at hand, one might expect messages featuring sources whom audience members perceive as credible to shape belief in the paranormal (Ramsey et al., 2011). In keeping with widespread public perceptions of scientists as trustworthy (Krause et al., 2019), studies have found that messages invoking scientific sources can influence beliefs about UFOs (Sparks & Pellechia, 1997; Sparks et al., 1998), hauntings (Brewer, 2012), and ESP (Brewer, 2013). Along the same lines, researchers have argued that messages invoking government sources may bolster belief in paranormal phenomena by lending reports of such phenomena an aura of legitimacy (Stise et al., 2024; Wright et al., 2024). Thus, the present study asks:

RQ3: What proportion of TikTok videos about paranormal topics include (a) scientific sources and (b) government sources?

In addition to looking at what types of sources paranormal TikTok videos cite, it is important to consider whose voices these videos include – particularly in terms of gender, given findings of gender differences in paranormal beliefs (Bader et al., 2017; Rice, 2003; Silva, 2023; Silva & Woody, 2022). Women have historically tended to report higher levels of overall belief in paranormal phenomena than men (Rice, 2003), but 'gender gaps' in paranormal belief also vary across specific phenomena. Previous research has found that women are more likely than men to believe in nonmaterial phenomena such as ghosts, hauntings, and supernatural abilities (Bader et al., 2017; Silva, 2023; Silva & Woody, 2022; Wright et al., 2024), whereas findings regarding belief in material phenomena have been mixed. Some studies have found that men are more likely than women to believe in extraterrestrials (Bader et al., 2017; Rice, 2003) and Bigfoot (Bader et al., 2017), but other studies have found no significant differences between men and women in terms of beliefs about UFOs, extraterrestrials, or cryptids (Dawson et al., 2023; Silva, 2023; Silva & Woody, 2022; Stise et al., 2024). When gendered patterns in paranormal beliefs do emerge, they may reflect the social construction of gender and paranormal phenomena: for example, in the U.S. context, discourses about material phenomena have tended to place relatively greater emphasis on notions of rationality, objectivity, and stereotypical masculinity, whereas discourses about nonmaterial phenomena have tended to place more emphasis on spirituality, intuition, and stereotypical femininity (Bader et al., 2017; Silva & Woody, 2022).

To the extent that paranormal TikTok videos replicate these social constructions, they may reinforce gendered patterns in paranormal beliefs. Additionally, the popularity of text-to-speech on TikTok (Lyons, 2021) raises the possibility that audience members may encounter not only human voices but also computerized voices in paranormal videos on the platform – which in turn, may carry implications for audience responses given that people tend to perceive human voices more favorably than computerized voices (Dai et al., 2023; Stern et al., 2006). Building on these points, the present study asks the following question:

RQ4: What proportion of TikTok videos about paranormal topics include (a) female voices, (b) male voices, (c) human voices, and (d) computerized voices?

Yet another set of potentially relevant message factors revolves around the video features facilitated by TikTok's design. Each social media platform possesses a distinct set of affordances – that is, things it allows or makes impossible, as well as uses it encourages or discourages (Treem & Leonardi, 2013; Tufekci, 2014). For example, TikTok's design facilitates the use of music, text on screen, and filters such as green screens. Each of these features, in turn, could carry implications for the potential effects of TikTok videos on paranormal beliefs: research on heuristic processing of video messages suggests that uses of music (Brader, 2006), text on screen (Groenendyk & Valentino, 2002; Keene et al., 2019; Kim & Sundar, 2016), and filters (Weikmann & Lecheler, 2023) may all shape the impact of such messages on audience beliefs. Accordingly, the present study asks:

RQ5: What proportion of TikTok videos about paranormal topics feature (a) music, (b) text on screen, and (c) filters?

A final question addresses how different content factors are related to engagement with paranormal TikTok videos. Previous research has demonstrated that a variety of message variables can predict user engagement with TikTok videos about topics such as news (Cheng & Li, 2024), politics (Widholm et al., 2024) and public health (Wu et al., 2024; Yang et al., 2023). To date, however, research has not examined how message characteristics – including the presence of claims, visuals as evidence, sources, voices, and features – predict engagement with TikTok videos about paranormal topics. With this in mind, the present study asks:

RQ6: What content factors are related to engagement with TikTok videos about paranormal topics?

Methods

The data for this study came from a quantitative content analysis (see Krippendorff, 2018) that systematically captured message factors in TikTok videos about three paranormal topics: UFOs, hauntings, and cryptids. The study's design built on previous content analysis research regarding media messages about the paranormal (Wright et al., 2024).

Sample

The researchers sampled videos by creating three new TikTok accounts (one per topic) with the user age set at 20 (to reflect the site's young-skewing user base and inform future experiments with college-age samples) and searching for two hashtags per topic: #UFO and #UAP for UFOs, #haunting and #paranormal for hauntings, and #cryptid and #bigfoot for cryptids. These hashtags were selected based on the extent to which they yielded videos that were both popular (in terms of likes) and relevant (in terms of focusing on paranormal topics; for example, one alternative hashtag, #ghost, yielded numerous popular videos, but a large proportion of them were music videos for recording artists). The searches were conducted from March 26 to April 2, 2024.

In compiling the sample, the researchers excluded videos posted before June 25, 2021, the release date for the U.S. government's Preliminary Assessment of Unidentified Aerial Phenomena. The researchers also excluded videos with fewer than 10,000 likes (to restrict the sample to relatively prominent and popular videos), videos that included only non-English audio without embedded English captions (given that the coders primarily spoke English), and videos longer than 5 minutes (given the study's focus on short-form videos). In addition, the researchers excluded sponsored videos, stitch or duet videos, music videos featuring performers, and videos that explicitly identified their content as not real (e.g. videos labeled as clips from fictional movies or television programs, videos labeled as comedy or prank videos, and videos labeled as being animated or AI-generated). Beyond this last criterion, the researchers made no attempt to screen out videos based on their veracity or plausibility.

The initial sample included 42 videos for each search term (84 videos about each topic). Of these, 5 were deleted from the platform before the coding took place. Thus, the sample for coding included 247 videos: 83 about UFOs, 81 about hauntings, and 83 about cryptids.

Coding

The unit of analysis was the video. The coders were undergraduates in a content analysis course who had completed five in-class training exercises for the present study. These coders analyzed the images, text on screen, and sound in the videos through the TikTok app with

automated captions turned off; they did not code captions or hashtags except when embedded in the video itself. The key variables in the analysis were as follows (see the Appendix for the codebook).

Claims

Coders counted a claim as being present if anyone in the video made it, even if other claims in the video contradicted it. A *paranormal claim* was any argument that the paranormal phenomenon in question was real or might exist, including definite statements and speculations (e.g., 'Could this be … '). A *skeptical claim* was any argument that the paranormal phenomenon in question was not real or did not exist, including statements that it was a fake, myth, hoax, misperception, misinterpretation, or optical illusion. A video could include both types of claims.

Visual evidence

Coders analyzed whether each video included any recorded *video footage* and/or *still photographs* (original or secondary) of the paranormal phenomenon in question. Video content explicitly indicated to be a reenactment or animation was not considered footage. Paintings and drawings were not considered photographs. A video could include both footage and photographs.

Sources

The analysis coded for two types of sources. *Scientific sources* included those identified as professors, medical doctors, veterinarians, university-affiliated researchers, and scientific agencies/organizations or described as belonging to a mainstream scientific discipline (e.g., an astronomer, biologist, meteorologist, physicist, or zoologist). Government sources included those identified as being affiliated with any government, such as public officials, government agencies or employees, military personnel, law enforcement officers, and video captured by a government vehicle, vessel, or aircraft (e.g., a police car dashcam or military jet fighter camera). A video could include both types of sources. A single source could be both scientific and government (e.g., NASA).

Voices

In analyzing voices, the coders first assessed whether each video included a *speaker*, defined as narrator, observer, witness, or bystander saying identifiable words on screen or in a voice-over (purported paranormal phenomena such as ghosts, aliens, or cryptids did not count as speakers). If the video included a speaker, coders also assessed whether it included a *human voice*, a *computer voice or text-to-speech*, a *male-sounding voice*, a *female-sounding voice*, and/or a *voice with a neutral, androgynous or ambiguous-sounding gender*. A video could include more than one type of voice. Given that videos typically did not present speakers' self-identifications of their gender, coders relied on noted differences in voice and appearance, situated in the gendered expectations that would likely be used by the average viewer of these videos (while recognizing that there are challenges in researcher attribution of gender; see Lindqvist et al., 2021).

Features

Coders identified three types of features allowed by TikTok's platform design: *music* (including soundtrack music and 'found' music), *text superimposed on the screen* (including captions embedded in the video itself but not including advertisements or TikTok auto-generated captions), and *filters or green screens* (if tagged within the video).

Engagement

Coders recorded four engagement metrics available for individual videos: *number of likes*, *number of saves*, *number of shares*, and *number of comments*. Coders also recorded the *number of account followers* and *number of account likes* for the account posting the video.

Table 1. Intercoder reliability coefficients for variables in the analysis of paranormal TikTok videos.

	Percentage agreement	Gwet's AC
Paranormal claim	86%	.72
Skeptical claim	78%	.71
Video footage	92%	.90
Still photograph	92%	.88
Scientific source	99%	.99
Government source	95%	.94
Speaker	94%	.92
Human voice	92%	.85
Computer voice	95%	.93
Male voice	93%	.87
Female voice	94%	.89
Nonbinary voice	94%	.93
Music	87%	.73
Text on screen	94%	.92
Filter/green screen	79%	.73
N		247

Intercoder reliability

Following recommended practices for content analysis (Lombard et al., 2002), coders conducted two rounds of practice coding using videos not included in the final sample ($n = 12$ for each round) to ensure that the coding scheme yielded reliable results. Afterward, two coders coded each video in the final sample (all videos were double-coded given that a secondary goal of the analysis was to identify potential stimuli for a subsequent experimental study). Table 1 reports the percentage agreement between coders and a chance-corrected measure of intercoder reliability (Gwet's AC, which is appropriate for variables with relatively high or low levels of prevalence; Gwet, 2008) for the measures of claims, visual evidence, sources, voices, and features. Intercoder reliability was acceptable (percentage agreement > 75%, Gwet's AC > .70) for all variables. Disagreements between coders were resolved by a team of trained graduate students. Four videos were no longer available on the platform during this resolution process; thus, the final results presented below are based on a sample of 243 videos (80 for UFOs, 80 for hauntings, and 83 for cryptids).

Results

The videos in the sample were posted by accounts that ranged widely in popularity. The highest number of account followers was 16,100,000 (for @mndiaye_97), and the highest number of account likes was 265,750,000 (for @impaulsive). Meanwhile, the lowest figures were 537 and 19,500, respectively. Whereas previous research on a sample of popular paranormal YouTube videos found that two-thirds of UFO videos and half of haunting videos were posted by channels affiliated with traditional media organizations (Wright et al., 2024), only one video in the present study's sample was posted by an account affiliated with a traditional media organization (@travelchannel). This pattern highlights potential differences across video-sharing platforms in regard to who produces popular paranormal content – a point the conclusion revisits.

The analysis found that paranormal claims were more common than skeptical claims in the sample (RQ1; see Figure 1). A majority of videos (60%) included a paranormal claim. For example, a UFO video posted by @ofanotherworld shows an unidentified man saying that there 'had in fact been face to face meetings between United States officials and extraterrestrials,' a haunting video posted by @magicalpoltergeist shows home security footage of a trash can moving by itself and a refrigerator door repeatedly opening and slamming shut with text on screen reading, 'This is what happen[ed] 1 hr before I woke up to use the restroom. Demons are really angry at me,' and a cryptid video posted by @_theparanormalchic shows drone footage of a purported Sasquatch along with the text 'Bigfoot is

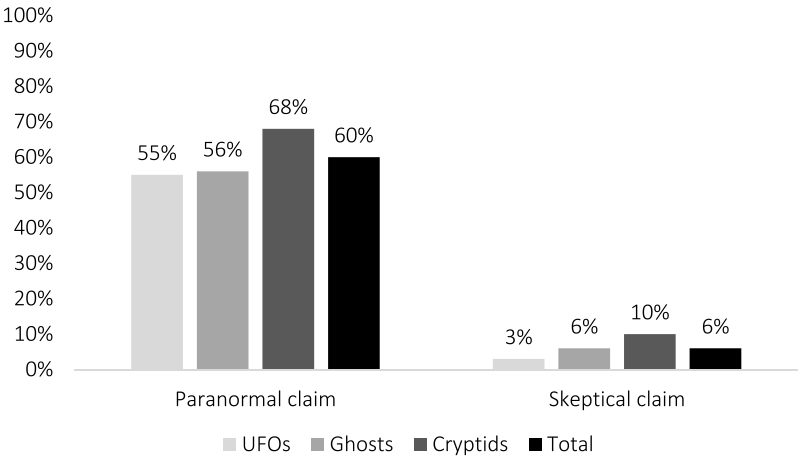

Figure 1. Claims in paranormal TikTok videos, by topic ($N = 243$).

real!' By contrast, only 6% of videos included a skeptical claim. For example, a cryptid video posted by @mndiaye_97 provides potential mundane explanations for cryptids, arguing that the Chupacabra is most likely a dog with a severe case of mange and that a sea monster is 'probably just some whale freeing his willy.' Around half the videos that included a skeptical claim also included a paranormal claim (3% of all videos). For example, a video posted by @danyul25 shows security footage of something falling from a dollhouse and a father telling his child, 'See, now the ghost is very upset' (a paranormal claim); in response, the child giggles and says, 'There are no ghosts in here' (a skeptical claim). Slightly more than a third of the videos (37%) included neither type of claim. The prevalence of paranormal claims did not differ significantly across topic; nor did the prevalence of skeptical claims.

A large majority of videos (86%) included footage of purported paranormal phenomena, while a relatively small proportion (14%) included still photographs of such phenomena (RQ2; see Figure 2). Examples of the former include a UFO video posted by @midnightstories32 showing what appears to be footage filmed from an airplane of an object speeding across the sky, a haunting video posted by @_doyoubelieve_2 showing what appears to be footage taken on a phone of lights in a kitchen turning on and off and a dark shape appearing around the corner of the doorway, and a cryptid video posted by @maximumfearyt showing trailcam footage of two pale, slender humanoid 'skinwalkers' in the

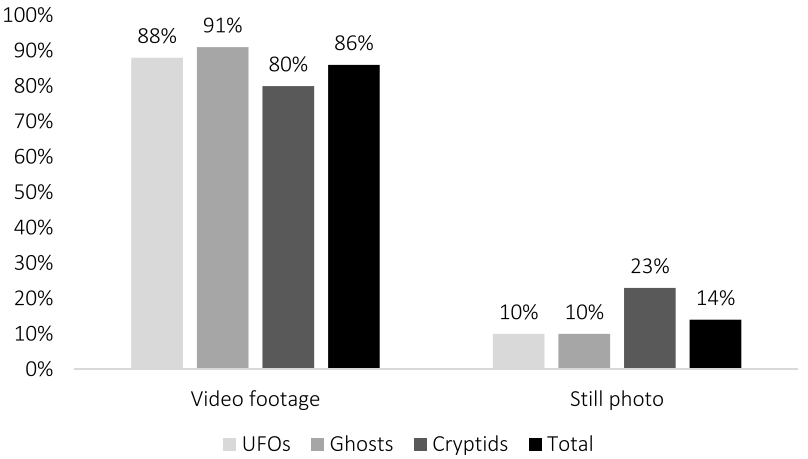

Figure 2. Evidence in paranormal TikTok videos, by topic ($N = 243$).

Appalachian mountains. Examples of videos with photographs include a UFO video posted by @marcus.dipaola showing two photos of floating lights taken from an oil rig off the coast of Mexico and a cryptid video posted by @xtv.news showing three photos of an alleged Bigfoot along with one photo of purported Bigfoot tracks in the snow. Among all videos, 6% included both types of purported visual evidence, whereas 5% included neither. The prevalence of footage differed marginally across topics ($\chi 2$ (df = 2) = 4.88; $p = .09$; $\phi = .14$), with cryptid videos as the low category (80%, versus 88% for UFO videos and 91% for haunting videos). The prevalence of photographs differed significantly across topics ($\chi 2$ (df = 2) = 7.37; $p \leq .05$; $\phi = .17$), with cryptid videos as the high category (23%, versus 10% for videos about each of the other topics).

In terms of sources (RQ3), few videos in the sample included scientific sources (2%) or government sources (6%) (see Figure 3). One rare double exception was a UFO video posted by @ufovideostk stating that 'astronomers reported an unusual sighting of a UFO,' that 'scientists were baffled by the object's massive size and ability to withstand the intense heat and radiation of the sun,' and that 'images from NASA's Solar Dynamics Observatory confirmed the event.' Another exception was a video posted by @astro_alexandra discussing a NASA report on UAPs. The presence of scientific sources differed marginally across topics ($\chi 2$ (df = 2) = 5.44; $p = .07$; $\phi = .15$), with UFO videos as the high category (5%, versus 1% for haunting videos and 0% for cryptid videos). The presence of government sources differed significantly across topics ($\chi 2$ (df = 2) = 10.80; $p < .01$; $\phi = .21$), with UFO videos as the high category again (13%, versus 6% for cryptid videos and 0% for haunting videos).

Looking at voices in the sample (RQ4), most videos (81%) included at least one speaker (see Figure 4(a)). Around two-thirds of videos (69%) included human voices, whereas relatively few videos (16%) included computerized voices. None of these proportions varied significantly across topics. A significant gender gap emerged in the sample, with more than twice as many videos including male voices (66%) versus female voices (29%); fewer than 1% of videos included nonbinary or gender-neutral voices (see Figure 4(b)). Furthermore, the presence of male voices ($\chi 2$ (df = 2) = 14.64; $p \leq .01$; $\phi = .25$) and female voices ($\chi 2$ (df = 2) = 18.63; $p \leq .01$; $\phi = .28$) differed significantly across topics. The gender gap was relatively narrow for haunting videos (51% with male voices versus 45% with female voices), wider for UFO videos (68% versus 28%), and even wider for cryptid videos (80% versus 15%). Among all videos, 15% included both male and female voices, whereas 20% included neither.

Turning to features allowed by TikTok's design (RQ5), the analysis found that slightly more than half the videos (54%) included music (see Figure 5). The percentage doing so differed significantly across topics ($\chi 2$ (df = 2) = 5.94; $p \leq .05$; $\phi = .16$): it was highest for videos about ghosts (63%) and lowest for videos about UFOs (44%). The former often featured creepy horror-

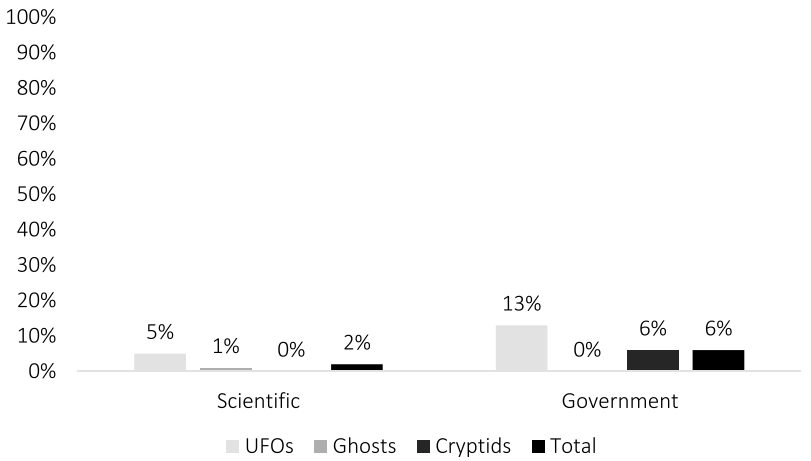

Figure 3. Sources in paranormal TikTok videos, by topic ($N = 243$).

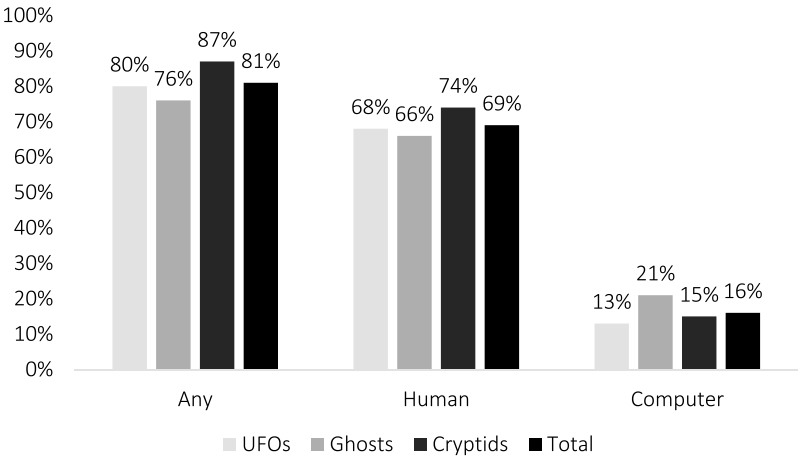

Figure 4a. Types of speakers in paranormal TikTok videos, by topic ($N = 243$).

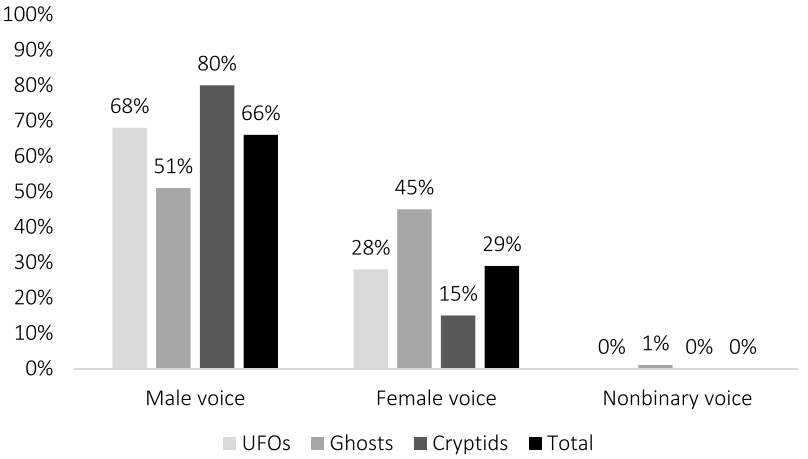

Figure 4b. Gender of speakers in paranormal TikTok videos, by topic ($N = 243$).

style music with wordless vocalizations (as in a video posted by @urbanamerica) or dissonant tones (as in a video posted by @mrtoanparanormall), whereas the latter tended to feature faster-paced and more exciting music (as with the stringed instrumentation in a video posted by @alienarehere). Cryptid videos featured a mix of styles depending on the specific creature in question. In terms of other features, a large majority of videos (83%) included text on screen, whereas few videos (8%) used filters. Among filters, a relatively common one was the use of green screens allowing a 'floating head' narrator to appear over video footage (as in a UFO video posted by @trendingprofinds).

The engagement metrics varied widely across videos. The number of likes ranged from 10,200 to 5.5 million (median = 97,250); the number of saves ranged from 560 to 617,100 (median = 9,898), the number of shares ranged from 77 to 400,000 (median = 4,819), and the number of comments ranged from 0 (for three videos with comments turned off; these were excluded from subsequent analyses of comments) to 231,900 (median = 2,185). The video with the most likes and saves was a haunting video posted by @urbanamerica about Alaskan nature spirits known as the Ircenrraat. The video with the most shares was a haunting video posted by @viralityparanormal showing a woman being dragged to a basement by a 'demonic presence.' The video with the most comments was a haunting video posted

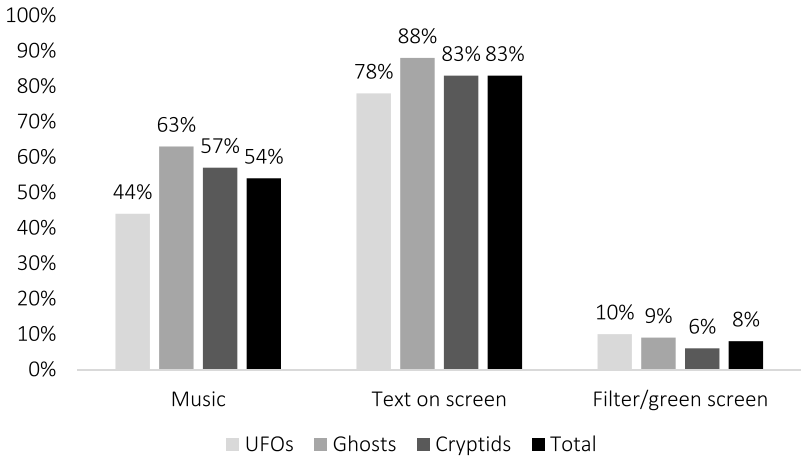

Figure 5. Platform features in paranormal TikTok videos, by topic ($N = 243$).

by @khalilslife showing 'poltergeists' singing the theme song to the children's television program *Sesame Street*.

Given that the engagement metrics were skewed by outliers with high scores, the analysis of content factors associated with engagement (RQ6) focused on the natural logs of these metrics, which were more normally distributed. All four forms of engagement differed across topics in one-way ANOVAs at $p < .01$: for likes, $F(2,241) = 19.26$, $\eta 2 = .15$; for shares, $F(2,241) = 7.23$, $\eta 2 = .06$; for saves, $F(2,241) = 20.87$, $\eta 2 = .14$; and for comments, $F(2,238) = 7.96$, $\eta 2 = .06$. Across all four metrics, haunting videos received the most engagement and cryptid videos received the least.

A series of independent samples t-tests explored whether claims, visual evidence, sources, voices, and features were associated with greater engagement. These tests showed that videos with paranormal claims and videos without paranormal claims received similar levels of engagement, as did videos with skeptical claims and videos without skeptical claims. Videos with purported footage received more comments than videos without footage ($p \leq .05$; $d = .36$), while videos with photos received fewer shares ($p \leq .01$; $d = .51$) and comments ($p \leq .01$; $d = .49$) than videos without photos. None of the engagement metrics differed significantly depending on the presence of scientific or government sources. Videos with speakers received more likes ($p \leq .05$; $d = .33$), shares ($p \leq .05$; $d = .35$), and saves ($p \leq .05$; $d = .75$) than videos without speakers. Engagement did not differ depending on the presence of human, computer, or male voices. By contrast, videos that included female voices were particularly likely to receive likes ($p \leq .01$; $d = .45$), shares ($p \leq .05$; $d = .30$), saves ($p \leq .01$; $d = .77$), and comments ($p \leq .05$; $d = .58$). Similarly, videos that included nonbinary or gender-neutral voices were particularly likely to receive likes ($p \leq .01$; $d = 2.54$), shares ($p \leq .05$; $d = 1.96$), saves ($p \leq .01$; $d = 2.58$), and comments ($p \leq .05$; $d = 2.33$). Compared to videos without music, those with music received fewer shares ($p \leq .05$; $d = .30$) and comments ($p \leq .01$; $d = .36$). In addition, videos with text on screen received fewer likes ($p \leq .05$; $d = .40$), shares ($p \leq .01$; $d = .54$), and comments ($p \leq .05$; $d = .40$) than videos without text on screen. Engagement did not differ significantly depending on the presence of filters.

A complementary series of analyses tested what content variables were associated with falling into the highest tier of engagement, defined as scoring in the top 20% for the metric in question. These analyses yielded patterns that were largely similar to the patterns for the logged engagement measures, with three notable exceptions. For two factors, the previously observed patterns disappeared: the inclusion of a speaker or music made no difference in terms of whether videos fell into the top tier of engagement. Meanwhile, videos that included government sources were particularly *un*likely to rank among the most-shared ($\chi 2$ (df = 2) = 4.14; $p \leq .05$; $\phi = .13$) and most-commented-upon videos ($\chi 2$ (df = 2) = 4.04; $p \leq .05$; $\phi = .13$).

In addition, a series of Ordinary Least Squares regression analyses explored the extent to which the presence of male voices and female voices interacted with other message factors in predicting engagement as captured through the logged measures. These analyses revealed three consistent patterns in terms of which interactions significantly increased the variance explained in engagement. First, videos with paranormal claims *and* male voices received relatively few likes ($b = -.95$; $p \leq .05$; $\Delta R^2 = .02$), shares ($b = -1.28$; $p \leq .01$; $\Delta R^2 = .03$), saves ($b = -1.24$; $p \leq .01$; $\Delta R^2 = .03$), and comments ($b = -1.08$; $p \leq .01$; $\Delta R^2 = .03$). Second, videos with footage *and* male voices received particularly high levels of likes ($b = 2.23$; $p \leq .01$; $\Delta R^2 = .03$), shares ($b = 1.67$; $p = .06$; $\Delta R^2 = .02$), saves ($b = 2.22$; $p \leq .01$; $\Delta R^2 = .03$), and comments ($b = 1.88$; $p \leq .01$; $\Delta R^2 = .03$). Third, videos with music *and* female voices received particularly high levels of likes ($b = 1.40$; $p \leq .01$; $\Delta R^2 = .04$), shares ($b = .88$; $p = .06$; $\Delta R^2 = .01$), saves ($b = 1.32$; $p \leq .01$; $\Delta R^2 = .04$), and comments ($b = .87$; $p \leq .05$; $\Delta R^2 = .02$).

Discussion

The present study sought to extend the growing literature investigating paranormal content on social media. Before researchers can begin to understand whether – and, if so, how – paranormal short-form videos influence audience members' beliefs, they first need a systematic understanding of the content in these videos. While previous research has analyzed paranormal content on other social media platforms (Wright et al., 2024), the current study represents an initial look at how TikTok videos present paranormal topics. As such, its findings provide starting points for testing how message factors in these videos influence paranormal beliefs – as well as for studying how messages on the site may influence, and potentially distort, perceptions about other fringe topics, from urban legends to conspiracy theories. Interpreted through a model of heuristic processing that links cognitive accessibility to both short-term priming and longer-term cultivation of mental structures, or schema (Nisbet, 2006; Shrum, 1996, 2001), the results highlight a set of potential effects that researchers could explore.

First, the prevalence of paranormal claims in the sample, combined with the dearth of skeptical claims, suggests that TikTok users will tend to see messages that affirm purported paranormal phenomena. This pattern is consistent with research demonstrating that paranormal claims appear in a majority of YouTube videos about UFOs and ghosts (Wright et al., 2024). At the same time, the current study found a lower proportion of paranormal claims in TikTok videos (60%) compared to previous findings for YouTube (94%, as reported by Wright et al., 2024), perhaps reflecting the short-form nature of TikTok content. Building on findings that paranormal claims in other sorts of media can influence public beliefs (Brewer, 2012, 2013; Johnson & Sparks, 2024; Sparks, 1998; Sparks & Pellechia, 1997; Sparks et al., 1994, 1995), future research could test whether exposure to such claims in TikTok videos produces similar effects.

In regard to imagery, the current study revealed that purported video evidence of paranormal phenomena, particularly in the form of footage, was common on TikTok. This result is consistent with recent findings regarding the prevalence of such footage in paranormal YouTube videos (Wright et al., 2024). Given findings that visual imagery in other media, such as television, can influence viewers' paranormal beliefs (Sparks et al., 1995), it would be useful to explore how exposure to visual evidence in TikTok videos influences such beliefs, as well as whether such influence depends on the perceptual realism of the purported evidence (see Kirby, 2003, 2011).

Another aim of the current study was to assess how often paranormal TikTok videos presented scientific or government sources. The videos analyzed seldom included either type of source, potentially restricting their credibility in terms of institutional legitimacy (see Brewer, 2012; Sparks & Pellechia, 1997; Sparks et al., 1998; Wright et al., 2024). Given previous findings that YouTube videos about paranormal topics – particularly UFOs – frequently mentioned government sources (while rarely citing scientific sources; Wright et al., 2024), one implication here is that the dearth of government sources in paranormal TikTok videos could dampen the effects of such videos relative to YouTube videos. The comparative absence of TikTok videos from accounts tied to traditional media could further limit their institutional credibility relative to YouTube videos (a majority of which

came from accounts linked to media organizations; see Wright et al., 2024). Having said this, sources in TikTok videos about the paranormal may vary from this study's sample (English-language videos found through searches using U.S.-based accounts) to other populations (e.g., videos on Douyin, the Chinese counterpart to TikTok, both of which are owned by the Chinese corporation ByteDance).

Yet another goal of the current study was to understand whose voices appeared in paranormal TikTok videos. The results revealed an overall gender gap in speakers, with male voices outnumbering female voices by more than two to one. Consistent with research on the social construction of gender and the paranormal (Bader et al., 2017; Silva & Woody, 2022), the results also revealed differences across topics: the gender ratio was relatively even for hauntings but skewed toward male voices for UFOs and even more skewed toward male voices for cryptids. Thus, exposure to paranormal TikTok videos may tend to reinforce gendered constructions of the paranormal along a nonmaterial (hauntings) versus material (UFOs and cryptids) divide (see Bader et al., 2017; Silva & Woody, 2022). The results also revealed that paranormal TikTok videos tended to include human voices rather than computer voices, which could help to foster favorable responses among viewers (see Dai et al., 2023; Stern et al., 2006).

Building on research highlighting the importance of social media affordances (Treem & Leonardi, 2013; Tufekci, 2014), the present study sought to identify video features that may be relevant to media effects. Given evidence of associations between music and emotional responses (e.g., Brader, 2006; Juslin et al., 2010), the finding that many videos included music raises the question of whether the presence of music in paranormal TikTok videos affects viewers via emotional arousal. The videos analyzed also tended to present text on screen, which could shape audience processing of their content (Keene et al., 2019). For example, congruent textual cues might reinforce any effects of spoken messages or images. In contrast to music and text on screen, filters appeared in relatively few videos. One consideration here is that the present study used a restrictive definition of filters, requiring them to be tagged within videos to be counted. A broader definition might reveal a higher prevalence of filters.

A final set of implications flowing from the current study's results centers on patterns in viewer engagement. Some types of videos appeared to elicit greater engagement than others; for example, videos about hauntings received relatively high levels of engagement whereas videos about cryptids received less engagement. In part, these patterns could reflect differing cultural resonances for different types of paranormal phenomena (see, e.g., Bader et al., 2017). At the same time, such differences could also reflect the specific affordances of TikTok (Dvir-Gvirsman et al., 2024) as well as the demographics of its user base (Anderson et al., 2023; Gottfried et al., 2024). With all this in mind, future research could explore uses and gratifications for consuming different types of paranormal content on TikTok (see, e.g., Nguyen & Veer, 2024).

In addition, videos featuring speakers elicited higher levels of engagement than videos without speakers. Though male voices outnumbered female voices, videos featuring the latter stood out for their relatively high number of likes, saves, shares, and comments. These differences could reflect audience preferences for female voices in paranormal TikTok videos, even in the face of the observed gender gap in such voices. However, an alternative (or additional) possibility is that other message factors – such as content type and communication styles – covary with communicator gender in ways that influence user engagement. For example, women content creators in paranormal TikTok may benefit in terms of engagement by focusing on hauntings (a topic with higher engagement) over cryptids (a topic with lower engagement).

The current study's findings are qualified by limitations of the study's design. In terms of the sample, the generalizability of the findings is restricted by the platform, topics, time period, popularity threshold, and language selected for the study. This study focused solely on TikTok, leaving open the possibility that analyses of paranormal videos on other short-form video social platforms would yield different results. Similarly, the current study's focus on UFOs, hauntings, and cryptids limits its capacity to speak to content about other paranormal topics (e.g., astrology or psychic abilities). It is also possible that videos from different time periods, videos with fewer likes, and/or videos in

languages other than English will feature different patterns of content. In terms of the study's analysis, elements of subjectivity were inevitably present in the coding of variables such as communicator characteristics. Furthermore, the analysis did not assess the tone, narrative style, or plausibility of videos. For example, some paranormal TikTok videos may be humorous or satirical, and audience members may respond to these differently than they respond to more serious videos (for precedent based on print messages, see Brewer, 2013).

Keeping these limitations in mind, the present study's results suggest a set of steps for future research. Following research on television viewing (Sarapin & Sparks, 2015; Sparks & Miller, 2001; Sparks et al., 1997), film viewing (Geusens, 2023), and YouTube use (Stise et al., 2024; Wright et al., 2024), survey research could investigate patterns in TikTok use and paranormal beliefs. Additionally, studies could build on previous experimental approaches (Brewer, 2012, 2013; Johnson & Sparks, 2024; Sparks, 1998) to test how different message characteristics in paranormal TikTik videos – including claims, visuals, sources, voices, and features – influence viewers' beliefs as well as to explore potential mechanisms underlying such effects, including cognitive accessibility. Looking beyond these approaches, qualitative studies could add depth and nuance to our understanding of how people experience and interpret paranormal videos on social media. Finally, future research could extend this study's approach by investigating the content and potential effects of short-form social media videos about other fringe topics, including conspiracy theories. Given the extent of popular belief in UFOs, ghosts, and cryptids, studying the role of media messages in fostering paranormal beliefs is worthwhile in its own right; at the same time, insights into this role may also carry broader implications.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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APPENDIX

Appendix: *Coding Scheme for Paranormal TikTok Videos*

Video content includes sound, images on screen, and text on screen. Code on the TikTok app with captions turned off. Do not code captions or hashtags unless shown in the video itself.

CLAIMS

Count a claim as being present if anyone in the video makes it, even if other claims in the video contradict it. A video can include both of the following claims or neither.

Paranormal claim? (Yes/No). Does the video voice-over or text on screen include a claim or argument that the paranormal phenomenon in question is or may be real/does or may exist? This can include definite statements ('This is a . . . '), speculative statements ('This could be a . . . '), or questions ('Could this be a . . . ?') as well as statements attributed to nonspecific sources ('Some people say . . . ' 'Rumors say . . . ' 'Legend says . . . ' or 'It is said . . . ').

Skeptical claim? (Yes/No). Does the video voice-over or text on screen include a claim or argument that the paranormal phenomenon in question is not real/does not exist? This can include statements that a paranormal phenomenon is a fake, myth, hoax, misperception, misinterpretation, or illusion. To count as a skeptical claim, a claim must go beyond merely expressing uncertainty or lack of knowledge about the phenomenon to express doubt about it, try to debunk or rebut it, make fun of or mock it, or try to provide a non-paranormal explanation for it.

EVIDENCE

A video can include both of the following (or neither).

Video footage of paranormal phenomena (Yes/No). Does the video include any recorded video footage (original or old) of the paranormal phenomenon in question? Video explicitly indicated to be reenacted, animated, or AI/computer-generated does NOT count as footage.

Photograph of paranormal phenomena (Yes/No). Does the video include any still photographs (original or old) of the paranormal phenomenon in question? Paintings and drawings do NOT count as photographs; nor do images explicitly indicated to be AI/computer-generated.

SOURCES

A video can include both of the following sources or neither. A single source can be both scientific and government.

Scientific source (Yes/No). Does the video feature or cite a source identified, either by voice or text, as being scientific? This can include a professor, medical doctor, veterinarian, university-affiliated researcher, or scientific agency/organization such as NASA. It can also include someone described as belonging to a mainstream scientific discipline, such as an astronomer, biologist, meteorologist, physicist, or zoologist. Being described as an expert, researcher, author, paranormal investigator, ufologist, or cryptozoologist is NOT enough by itself to identify a source as scientific.

Government source (Yes/No). Does the video feature or cite an information source who is identified by voice, text on screen, or uniform as being affiliated with any government? This can include a public official such as a senator; a government agency such as NASA or the Pentagon, or a person working for such an agency; military personnel, such as a Navy pilot; a government employee, such as park ranger; a law enforcement officer, such as a police officer; or video captured by a government vehicle, vessel, or aircraft (such as a police car dashcam or jet fighter camera). Affiliation with a university or capture through a camera in a public setting is NOT enough by itself to identify a source as being a government source.

COMMUNICATORS

Speaker (Yes/No). Does the video feature a narrator, observer, witness, or bystander speaking identifiable words on screen or in a voice-over? Purported paranormal phenomena do NOT count as speakers.

If the video includes a speaker, code for whether it includes the following (a video can include more than one or none of these):

- A human voice? (Yes/No)
- A computerized voice/text-to-voice? (Yes/No)
- A male-sounding voice? (Yes/No)
- A female-sounding voice? (Yes/No)
- A voice with a neutral, androgynous or ambiguous-sounding gender? (Yes/No)

FEATURES

Code for the presence of each of the following in the video (a video can include more than one or none of these):

Music (Yes/No). This includes soundtrack music and/or 'found' music.

Text superimposed on the screen (Yes/No). This includes captions embedded in the video itself but does NOT include advertisements or TikTok auto-generated captions.

Filter/green screen (Yes/No). Count only if the use of a filter or green screen is explicitly indicated.

VIDEO INFORMATION

Record each of the following for the VIDEO:
Date video was posted, number of likes, number of comments, number of saves, number of shares

ACCOUNT INFORMATION

Record each of the following for the ACCOUNT THAT POSTED THE VIDEO:
Number of followers, number of likes